PM Conformity Hot Spot Analysis
Project Summary Form for Interagency Consultation

The purpose of this form is to provide sufficient information to allow the Transportation Conformity Working Group (TCWG) to determine if a project requires a project-level PM hot spot analysis pursuant to Federal Conformity Regulations.

The form is not required under the following circumstances:

1. The project sponsor determines that a project-level PM hot spot analysis is required or otherwise elects to perform the analysis; or
2. The project does not require a project-level PM hot spot analysis since it:
    a. Is exempt pursuant to 40 CFR 93.126; or
    b. Is a traffic signal synchronization project under 40 CFR 93.128; or
    c. Uses no Federal funds AND requires no Federal approval; or
    d. Is located in a Federal PM attainment area (note: PM10 and PM2.5 areas differ).

Projects other than those listed above may or may not need a project-level PM hot spot analysis depending on whether it is considered a "Project of Air Quality Concern" (POAQC), and should be brought before the TCWG for a determination.

It is the responsibility of the project sponsor to ensure that the form is filled out completely and provides a sufficient level of detail for the TCWG to make an informed decision on whether or not a project requires a project-level PM hot spot analysis. For example, the TCWG will be reviewing the effects of the project, and thus part of the required information includes build/no build traffic data. It is also the responsibility of the project sponsor to ensure a representative is available to discuss the project at the TCWG meeting if necessary.

Instructions:

1) Fill out form in its entirety. Enter information in gray input fields.

2) Be sure to include RTIP ID#. See http://scag.ca.gov/rtip/ if necessary.

3) Submit completed form to your local Transportation Commission who will submit it to the MPO. Caltrans projects can be submitted by Caltrans District representative.

The TCWG meets the fourth Tuesday of each month at SCAG Headquarters, 818 W. 7th Street, 12th Floor, Los Angeles, CA 90017. Participation is also available via teleconference. Call (213) 236-1800 prior to meeting to get the call-in number and pass-code.

Forms must be submitted by the second Tuesday of the month to be considered at that month's TCWG meeting.

REFERENCE

Criteria for Projects of Air Quality Concern (40 CFR 93.123(b)(1)) – PM_{10} and $PM_{2.5}$ Hot Spots

(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

(ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

(iii) New bus and rail terminals and transfer points than have a significant number of diesel vehicles congregating at a single location;

(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and

(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Links to more information:

http://www.fhwa.dot.gov/environment/conform.htm

http://www.epa.gov/otaq/stateresources/transconf/index.htm

TABLE 1
Type of Project

- New state highway
- Change to existing state highway
- New regionally significant street
- Change to existing regionally significant street
- New interchange
- Reconfigure existing interchange
- Intersection channelization
- Intersection signalization
- Roadway realignment
- Bus, rail, or inter-modal facility/terminal/transfer point
- Truck weight/inspection station
- At or affects location identified in the SIP as a site of actual or possible violation of NAAQS

RTIP ID# *(required)* ORA000195

Project Description *(clearly describe project)*
The Orange County Transportation Authority (OCTA) is proposing design modifications to the SR-22/West Orange County Connection (WOCC) Project at the following locations: Garden Grove Boulevard/Haster Street/Fairview Street, The City Drive, Town and Country Road, Glassell Street, and Tustin Avenue interchanges. The modifications to these locations differ from the design that were evaluated in the approved Final Environmental Impact Statement/Report (FEIS/EIR). Other proposed revisions include finalizing the location of the maintenance access ramps to the Lewis Storm Channel and finalizing the alignment of the Lewis Storm Channel box culvert under the SR-22 access ramps. It also included providing a noise barrier along the mainline between the Euclid Street westbound ramps. A description of the original project, which was evaluated in the FEIS/EIR (March 2003) and design plans, along with the proposed modifications evaluated in this Environmental Re-evaluation/Addendum are provided below for each area. The design modifications to the project would not result in any additional permanent right-of-way acquisitions. The appropriate local agencies (i.e., Orange County Flood Control District [OCFCD] and cities of Garden Grove and Orange) have been involved with the proposed changes, and their

Type of Project *(use Table 1 on instruction sheet)*
Reconfigure existing interchange and change to existing state highway – construct one HOV lane in each direction.

County	**Narrative Location/Route & Postmiles** SR-22 between I-405 and SR-55 12-ORA-22 KP/(PM) 1.1/21.2 (0.7/13.2) **Caltrans Projects – EA#** 071611
Orange	

Lead Agency: Caltrans and OCTA

Contact Person	**Phone#**	**Fax#**	**Email**
Mary Toutounchi	(714) 712-1640	(714) 712-1582	MToutounchi@octa.net

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5 X** **PM10 X**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)	**EA or Draft EIS**	**FONSI or Final EIS**	**X**	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action: October, 2006

Current Programming Dates *as appropriate*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	Prior RTIP	Prior RTIP	Prior RTIP	Prior RTIP
End	Complete	05-06	Prior RTIP	05/06

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*
The purpose of the design modifications are to: improve safety and traffic operations (e.g., vehicular and pedestrians) at specific local interchanges; provide improved maintenance access; and provide additional noise attenuation.

The purpose of the SR-22/WOCC project is to improve both existing and future mobility and enhance safety throughout the corridor. SR-22 represents a major link to other freeway systems within the Orange County area and is an important component of the county's transportation system.

Under existing conditions, SR-22 does not meet the capacity needs of the area. With projected population and employment growth trends indicating increased transportation volumes, SR-22 can be expected to experience worsening operational deficiencies. There is insufficient capacity within the SR-22 corridor on the freeway and adjacent arterial streets to accommodate existing and projected travel demand between the SR-55 interchange and the Los Angeles County line at I-405 and I-605.

Some portions of existing SR-22 do not conform to current state and federal highway design standards. Existing shoulder widths and vertical clearances, for example, are non-standard in some areas. Providing standard features where possible will improve safety on the freeway mainline and ramps.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*
Discussion of land uses/traffic generators will be focused on the cities of Garden Grove and Orange since these cities are where the proposed improvements are located.

Garden Grove, similar to almost every other city that borders SR-22, is at full build-out. The most prevalent land use in Garden Grove is residential, occupying approximately 50 percent of the City's total area. Within the project study area, there is a major industrial area located between Knott Street and Hoover Street, north of SR-22. There is a small area north of SR-22, between Beach Boulevard and Harbor Boulevard, which is mixed-use and commercial.

Land use south of SR-22 is predominantly residential and open space. Industrial land uses are also found south of SR-22 between Newhope Street and Harbor Boulevard. The entire area north of SR-22 and south of Trask Avenue, between Magnolia Street and Harbor Boulevard, is within the Garden Grove Redevelopment Plan Project Area.

Since the early 1980s, mid-rise and high-rise office buildings and business parks in the City of Orange have been built on land formerly occupied by small-scale, low-intensity offices, shopping centers, and industrial developments. Dense subdivisions, condominiums, and apartment complexes have replaced the traditional medium-sized lot, single-family residential tract.

The primary land use in Orange along SR-22 is commercial, with some retail uses near the east end of SR-22. A transition is made from major retail to commercial high-rises near Main Street. Further east along SR-22, Old Town commercial and mixed-retail are the predominant land uses. Saint Joseph Hospital and the Children's Hospital of Orange County are large public facilities located north of SR-22 nestled between several high-rise buildings. East of Glassell Street to Tustin Avenue, the predominant land use is low-density residential. At Tustin Avenue, the land use changes to commercial as far east as SR-55, where there is low-density residential.

According to the planning department of the City of Orange there are no proposed land use changes in the affected area. There are, however, several proposed development plans currently under consideration by the City, which are associated with The Block at Orange and the surrounding area.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

SR-22/WOCC Project Opening Year 2007

Condition	Location	AADT[1]	LOS[2]	% Trucks[3]	Truck AADT
Build	Beach Blvd - Knott St	168,700	E	4.9%	8,270
	Harbor Blvd - Euclid St	226,600	E	4.7%	10,650
	I-5/SR-57 - The City Dr	242,200	E	4.5%	10,900
	Main St - I-5/SR-57	179,500	E	4.5%	8,080
	Tustin St - Glassell St	158,700	E	3.4%	5,400
No Build	Beach Blvd - Knott St	153,300	E	4.9%	7,510
	Harbor Blvd - Euclid St	200,300	F	4.7%	9,410
	I-5/SR-57 - The City Dr	219,100	F	4.5%	9,860
	Main St - I-5/SR-57	183,900	E	4.5%	8,280
	Tustin St - Glassell St	167,900	E	3.4%	5,710

1. Interpolated from existing (1996) and 2020 No Build in the FEIS/EIR Table 3.7-3 and 2020 Build in Project Report Attachment F
2. Peak hour worse direction based on interpolated volumes and v/c conversion to LOS based on FEIS/EIR Table 3.7-4
3. Caltrans 2004 truck counts

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

SR-22/WOCC Project Design Year 2020

Condition	Location	AADT[1]	LOS[2]	% Trucks[3]	Truck AADT
Build	Beach Blvd - Knott St	177,600	F	4.9%	8,700
	Harbor Blvd - Euclid St	238,100	E	4.7%	11,190
	I-5/SR-57 - The City Dr	251,700	E	4.5%	11,330
	Main St - I-5/SR-57	184,900	E	4.5%	8,320
	Tustin St - Glassell St	162,000	E	3.4%	5,510
No Build	Beach Blvd - Knott St	158,100	E	4.9%	7,750
	Harbor Blvd - Euclid St	204,800	F	4.7%	9,630
	I-5/SR-57 - The City Dr	222,600	F	4.5%	10,020
	Main St - I-5/SR-57	190,500	F	4.5%	8,570
	Tustin St - Glassell St	173,600	E	3.4%	5,900

1. 2020 No Build from the FEIS/EIR Table 3.7-3 and 2020 Build from Project Report Attachment F
2. Peak hour worse direction from FEIS/EIR Table 4.7-6
3. Caltrans 2004 truck counts

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

The traffic analysis prepared for the project showed that under existing conditions, there would be increases in ramp traffic volumes at various interchanges along the SR-22 corridor (e.g., SR-22/Garden Grove Boulevard/Haster Street, SR-22/The City Drive, SR-22/Town and Country Road, SR-22/Glassell Street, and SR-22/Tustin Avenue). Turning movement counts were conducted at the City Drive/Metropolitan area which showed that operational improvements would be necessary since the number of vehicles exceeded the 300 capacity threshold at several locations (e.g., City Dr. s/b right approach; City Dr. n/b left approach; and Metropolitan Dr. e/b right approach). Turning movement counts were also conducted at the Garden Grove Boulevard/Fairview Street, SR-22/Town and Country Road e/b ramps, Glassell Street/SR-22 w/b ramps, and Tustin Avenue/SR-22 w/b on-ramp, which showed exceedances of the capacity thresholds.

The primary land uses in the vicinity of these ramps are commercial and residential. Therefore, it can be expected that the traffic increases on these ramps would be passenger vehicles. Furthermore, the proposed improvements are operational and facilitate the movement of traffic (e.g., installation of turn pocket lanes). Without these improvements, excessive queuing could occur at these interchanges.

Comments/Explanation/Details *(attach additional sheets as necessary)*

The construction of the mainline HOV on SR-22 is underway and it is anticipated to be complete in early 2007. Caltrans and OCTA, the Agency responsible for implementation of the SR-22/WOCC project, will obtain FHWA concurrence on the environmental re-evaluation for the design modifications described below. Therefore, this *PM Conformity Hot Spot Analysis Project Summary Form for the Interagency Consultation* solicits the concurrence of the Transportation Conformity Workgroup to determine that the proposed improvements described below are not considered "Project of Air Quality Concern (POAQC)."

Garden Grove Boulevard/Haster Street/Fairview Street

Original Project
The project includes adding a second left-turn lane on eastbound (e/b) Garden Grove Boulevard at the Fairview Street e/b on-ramp. The additional left turn lane was made by relocating the median island and eliminating one e/b lane on Garden Grove Boulevard.

Proposed Design Modifications
At the request of the City of Garden Grove, the westbound (w/b) thru lane was not eliminated. This change will be funded by the City of Garden Grove. The proposed modifications include moving the curb line south to accommodate the left turn lane. To do this, it required removing the existing sidewalk along the south side of Garden Grove Boulevard and reconstructing it behind the bridge columns. Figure 1 depicts the modifications described above.

The City Drive Interchange

Original Project
The Project Report plans includes the w/b The City Drive on-/off-ramps connecting directly to SR-22; it includes a single w/b thru lane along Metropolitan Drive; it includes two lanes at the intersection of the e/b off-ramp; and it did not include any improvements on City Drive.

Proposed Design Modifications
At The City Drive interchange, the following modifications were made (Figure 2 depicts the modifications described below):

- The w/b on-ramp was reconfigured from a direct connector to SR-22 to a connector to SR-22 via the southbound (s/b) I-5/SR-57 to w/b SR-22 connector. This was done to improve the traffic operations and safety of the interchange and reduced the project costs by eliminating a bridge span over The City Drive w/b on-ramp.
- At the request of the City of Orange, a second thru lane was added in the w/b direction of Metropolitan Drive between The City Drive and the M-Ramps. This was done to meet the City's requirement for arterials.
- The e/b off-ramp was widened from two lanes to three lanes at the request of the City of Orange. This was done to replace the free right turn island that was deleted as part of the operational and safety improvements to the intersection. This exclusive right turn lane will improve the operations of the intersection by not delay right turning traffic mixed with the thru/left turning traffic.
- A left-turn lane from northbound (n/b) The City Drive to w/b Metropolitan Drive was added to accommodate the change in configuration of the interchange. The existing configuration included a signalized intersection at the w/b SR-22 ramps and The City Drive and a signalized intersection at Metropolitan Drive and The City Drive. The intersection of the w/b ramps with The City Drive included a single n/b left turn lane and the intersection of Metropolitan Drive with The City Drive dual n/b left turn lanes. The signalized intersection at the existing Metropolitan Drive was closed. A second n/b left turn lane was added to the newly configured The City Drive and Metropolitan Drive intersection. The addition of the left turn lane requires The City Drive n/b curb be moved to the east. To do this, it required removing the existing sidewalk along the east side of The City Drive to and reconstructing it behind the bridge columns.
- A sidewalk was added along the s/b side of The City Drive at the request of the City of Orange to provide a continuous sidewalk.

Comments/Explanation/Details (continued)
Attach additional sheets as necessary; include narrative reason why POAQC or Not POAQC decision is appropriate

Town and Country Road Interchange

Original Project
The original project includes a three-lane off-ramp at the intersection of the e/b off-ramp and Town and Country Road. There was one left turn lane, one thru lane and one free right turn lane with and island.

Proposed Design Modifications
The proposed design modification is an operational and safety improvement. It eliminates the third free right turn-lane and adds a third exclusive right turn lane and eliminates the free right turn island. Figure 3 depicts the modification described above.

Glassell Street Interchange

Original Project
The original project includes two-lanes at the intersection westbound off-ramp and Glassell Street.

Proposed Design Modifications
At the request of the City of Orange, an exclusive right turn lane was added to improve the operations of the intersection by not delay right turning traffic mixed with the left turning traffic. Figure 4 depicts the modification described above.

Tustin Avenue Interchange

Original Project
The original project includes a two-lane w/b on-ramp at the Tustin Avenue interchange.

Proposed Design Modifications
At the request of the City of Orange, a third lane was added to the w/b Tustin on-ramp. The addition of the third lane will improve the operation of Tustin Avenue. It will accommodate simultaneous movement of the two n/b Tustin left turn lanes and one s/b Tustin right turn lane and thereby relieve s/b Tustin Avenue traffic congestion. The City of Orange is funding this improvement. Figure 5 depicts the modification described above.

The Lewis Storm Channel

Original Project
The Lewis Channel Conceptual Design Report included the enclosure of the existing open rectangular storm channel, adding a 3.7x1.8 meter box culvert along the Wintersburg Channel crossing SR-22, a ten meter transition structure to provide maintenance turn-around ability over the Wintersburg Channel and three maintenance access ramps.

Proposed Design Modifications
During the development of the final design, the three maintenance access ramps were moved slightly to accommodate surface improvements. The Lewis Street box culvert was moved to the south from under the SR-22 shoulder to under the auxiliary lane to avoid additional right of way requirements between Wintersburg Channel and the w/b Haster on-ramp. The addition of the 3.7x1.8 meter box was replaced by the installation of two-84 inch diameter reinforced concrete pipes. To accommodate the transition of the pipes and box culvert, the transition structure was increased and the maintenance turn-around structure was moved to the north. The final design of the box culvert dimensions were also slightly modified to accommodate flows, existing ground elevations and maintenance vehicles in the new Lewis Channel box culvert. Figure 6 depicts the modification described above.

Comments/Explanation/Details (continued)
Attach additional sheets as necessary; include narrative reason why POAQC or Not POAQC decision is appropriate

Euclid Street Noise Barrier

Original Project
The project report included a noise barrier along the edge of the w/b Euclid off-ramp.

Proposed Design Modifications
At the request of numerous citizens residing along Trask Avenue and Havenwood Drive, at the Euclid interchange a supplemental Traffic Noise Analysis was conducted in August 2005 to determine if a noise barrier was feasible and reasonable. The analysis found that including a soundwall along SR-22 mainline between the w/b on and off ramp gore areas was both feasible and reasonable. The study found that due to the grade differences between the ramp and mainline, the proposed noise barrier did not mitigate the noise for the area north of Trask Avenue. As a result, a noise barrier was added along the w/b mainline shoulder at the Euclid Street on-/off-ramps. This noise barrier was constructed approximately June 2006. Figure 7 depicts the modification described above.

The operational improvements at the aforementioned locations are strictly traffic enhancement measures designed to facilitate traffic flow. Specifically, these include turn pockets proposed at The City Drive, Town and Country Road, Glassell Street, and Tustin Avenue interchanges. See Figures 1 through 5 for further detail.

The screening analysis for the new air quality requirements has determined that the proposed design modifications would not contribute to increases in PM2.5 and PM10. This determination is predicated on the premise that all of the proposed design modifications are only operational improvements that do not contribute to a substantial increase in the traffic capacity for the SR-22 facility or local arterials. Without these operational improvements, traffic operations could worsen at some of the interchanges (e.g., Garden Grove Boulevard/Haster Street/Fairview Street, The City Drive, Town and Country Road, Glassell Street, and Tustin Avenue interchanges). Although capacity may be increased on certain segments of SR-22, the proposed improvements are not expected to substantially increase the vehicle fleet mix on SR-22, I-405, I-605, and the local arterials. Specifically, the truck AADT for the build versus the no build option would remain essentially the same. As previously discussed, land uses in the vicinity of the SR-22 corridor are primarily light commercial and residential. Therefore, this PM2.5/PM10 interagency consultation seeks the concurrence of the Transportation Conformity Workgroup that the proposed improvements at the aforementioned locations are not considered “POAQC.”